

Claims:

1. A system that isolates internal forces from adversely influencing propulsion of a vehicle comprising:

an elastic member for storing potential energy for later use as rotational kinetic energy;

5 a front retainer for retaining a forward end of said elastic member;

a drive shaft connected to said front retainer that transmits rotation of said front retainer to said drive shaft;

a drive shaft bearing within said front retainer that retains said drive shaft and allows rotation of said drive shaft;

10 a rear retainer for retaining a rearward end of said elastic member; and,

a motor isolation span that spans the length of said elastic member and rigidly retains said front retainer near a forward terminus and said rear retainer near an opposing rearward terminus to restrain compressive and torsional forces created by said elastic member during said storing of said potential energy and said release as rotational kinetic energy.

2. A system of claim 1 wherein said elastic member is a rubber band.

3. A system of claim 1 wherein said vehicle is a model aircraft.

4. A system of claim 3 wherein said rotational kinetic energy is used to rotate a propeller that provides thrust for said propulsion of said model aircraft.

5. A system of claim 1 wherein said drive shaft and said front retainer are incorporated within a single part.

6. A system of claim 1 that can be installed and removed from said vehicle as a single module.

7. A system for a model aircraft that isolates internal forces from adversely influencing aerodynamics if said model aircraft comprising:

a rubber band for storing potential energy for later use as rotational kinetic energy;
a front retainer for retaining a forward end of said rubber band;

5 a drive shaft connected to said front retainer that transmits rotation of said front retainer to said drive shaft;

a drive shaft bearing within said front retainer that retains said drive shaft and allows rotation of said drive shaft;

a rear retainer for retaining a rearward end of said rubber band; and,

10 a motor isolation span that spans the length of said rubber band and rigidly retains said front retainer near a forward terminus and said rear retainer near an opposing rearward terminus to restrain compressive and torsional forces created by said rubber band when twisted to store said potential energy and when released as rotational kinetic energy to rotate a propeller that provides thrust for said propulsion of said model aircraft.

8. A system of claim 7 wherein said drive shaft and said front retainer are incorporated within a single part.

9. A system of claim 7 that can be installed and removed from said vehicle as a single module.

10. A model aircraft powered by a system that isolates the internal forces from adversely influencing aerodynamics of said model aircraft comprising:

a model aircraft; and,

an elastic drive motor within said model aircraft comprising:

5 a rubber band for storing potential energy for later use as rotational kinetic energy comprising;

a front retainer for retaining a forward end of said rubber band;

a drive shaft connected to said front retainer that transmits rotation of said front retainer to said drive shaft;

10 a drive shaft bearing within said front retainer that retains said drive shaft and
allows rotation of said drive shaft;
a rear retainer for retaining a rearward end of said rubber band; and,
a motor isolation span that spans the length of said rubber band and rigidly
retains said front retainer near a forward terminus and said rear retainer near an
15 opposing rearward terminus to restrain compressive and torsional forces created by
said rubber band when twisted to store said potential energy and when released as
rotational kinetic energy to rotate a propeller that provides thrust for said propulsion
of said model aircraft.

11. A model aircraft of claim 10 wherein said drive shaft and said front retainer are
incorporated within a single part.

12. A model aircraft of claim 10 wherein said elastic drive motor can be removed
from and installed on said vehicle as a single module.

13. A method of propelling a vehicle with an elastic drive motor that isolates internal
forces from adversely influencing movement of said vehicle comprising the steps of:
retaining a forward end of an elastic member with a front retainer that is connected to
a drive shaft;
5 transmitting rotation of said front retainer to said drive shaft;
retaining a rearward end of said elastic member with a rear retainer;
retaining said drive shaft with a drive shaft bearing within said front retainer that
allows rotation of said drive shaft;
rigidly retaining said front retainer near a forward terminus of a motor isolation span
10 and said rear retainer near an opposing a rearward terminus of said motor isolation span that
spans the length of said elastic member;
storing potential energy by twisting said elastic member;
isolating compressive and torsional forces with said motor isolation span that are
created by restraining said elastic member;

15 releasing said potential energy of said elastic member as rotational kinetic energy to propel said vehicle; and,
isolating compressive and torsional forces from with said motor isolation span created by releasing said elastic member and producing said rotational kinetic energy.

14. A method of claim 1 wherein said step of releasing said potential energy of said elastic member as rotational kinetic energy to propel said vehicle further comprises:
utilizing said rotational kinetic energy is used to rotate a propeller that provides thrust to a model aircraft.

15. A method of providing thrust to a model aircraft with a rubber band drive motor that isolates internal forces from adversely influencing aerodynamics of said model aircraft comprising the steps of:

5 retaining a forward end of a rubber band with a front retainer that is connected to a drive shaft;
transmitting rotation of said front retainer to said drive shaft;
retaining a rearward end of said rubber band with a rear retainer;
retaining said drive shaft with a drive shaft bearing within said front retainer that allows rotation of said drive shaft;
10 rigidly retaining said front retainer near a forward terminus of a motor isolation span and said rear retainer near an opposing a rearward terminus of said motor isolation span that spans the length of said elastic member;
storing potential energy by twisting said rubber band;
isolating compressive and torsional forces with said motor isolation span that are
15 created by restraining said rubber band;
releasing said potential energy of said elastic member as rotational kinetic energy to rotate a propeller that provides thrust to said model aircraft; and,
isolating compressive and torsional forces from with said motor isolation span created by releasing said rubber band.